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## ABNORMAL AND DEFECTIVE CHILDREN

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## Abnormal and Defective Children.

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It is the earnest wish of the University of Missouri to be of aid in every way possible to the people of the state. In pursuance of this desire the Extension Division of the University has issued this bulletin upon the care and training of abnormal and defective children.

**Scientific Study of Children.**—For some time we have been used to the application of science to the solution of the farmer's problems. Through the College of Agriculture and other agencies, our state spends thousands of dollars annually in experimental investigations in trying to find better ways of meeting the problems of the farm, and in spreading the results of these investigations among those who can profit from the information. The farmer can get expert assistance and knowledge in dealing with his cholera hogs, the chinchbugs in his wheat or his infested orchard. He can get expert advice concerning soils and fertilizers and on all other subjects related to agriculture.

But we are not yet used to the idea of applying scientific knowledge to the problem of rearing children, in spite of the fact that children are very much like fruit trees and pigs and chickens, in that they need constant care and oversight during the period of growth. Among children, we find good stock and poor stock. When a child gets sick, there is a cause for it. If a child's development is retarded, there is a cause for that too. A child's body and mind grow and develop and function according to definite laws, just as is the case with all other kinds of living things. If a child's vision or hearing is defective, this has an effect on the child's life. If a child is not properly fed or clothed, or any vital organ is out of order, the child suffers in consequence. A person's mind is intimately related to his body, and generally speaking, whatever affects the body, affects the mind. If the body is fast or slow in development, so usually is the mind. Heredity is a great factor in the human race just as it is with lower animals, and with plants. We do not expect to raise apples on peach trees nor beans on melon vines. With domestic animals, we know that we get different results from different breeds. We must expect the same factor to work with our children. Some belong to good, strong, healthy stock and others to poor, weak and unstable stock. All our various mental and physical characteristics are, beyond doubt, transmitted by inheritance. Now, since all these things are true—since everything that happens in the development of a child is due to some cause—we must use every means known to man of guiding and directing child-development, so that each child

may come to maturity with the best possible equipment for its life-work having suffered no drawback from a cause that could have been removed.

The School of Education in our State University should fill the same place in the matter of rearing and educating children that the state College of Agriculture does in the work of farming. Experience proves that the state is justified in maintaining experiment stations and schools of agriculture. It will also be justified in spending even greater sums of money in finding out what is best to do for our children, and in spreading this knowledge among the teachers and parents of the state.

The purpose of this bulletin is to set forth the possibilities in one particular field—the proper education and treatment of abnormal and defective children.

**Subnormal or Feeble-minded Children.**—We are all different. Just as no two people are exactly alike physically, so no two people are just alike mentally. Some of us have traits that others lack. Some of us have traits developed to a higher degree than do others. Some of us have good memories, others have very poor memories. Some of us are capable of a high power of attention or concentration; others are scatterbrained and cannot apply themselves long at a time. Now, if from infancy one lacks some trait or traits of social importance, he is considered feeble-minded. Feeble-mindedness usually involves all the higher mental powers, but it is not always so, for it sometimes happens that a person has some trait unusually developed, as memory, for example, while in all others respects his mind is feeble. The feeble-minded person is usually incapable of concentrated attention or of logical reasoning and is a slow learner. Most specialists in this field look upon feeble-mindedness as a matter of arrested development. The child stops in its development at an early stage of growth. An adult person, for example, might have a mind much like that of a six-year-old child. This retarded development may be caused by some accident or disease, but in about two-thirds of the cases it is due to heredity. In the latter case, the child belongs to weak or poor stock mentally, and inherits the mental defect just as it inherits its hair-color or stature.

Careful studies indicate that in this country there are about four feeble-minded children in a hundred. One child in two hundred is a low grade imbecile or idiot. If this estimate of the number of feeble-minded holds good in Missouri, we have in the state 38,260 feeble-minded children between the ages of six and twenty-one. If we exclude the lowest grades, there are left 33,477, that are likely to be sent to the public schools. In the feeble-minded institute at Lincoln, Illinois, it was found that a large per cent of the inmates had been in the public

schools. Doubtless nearly all of the higher grade imbeciles are sent to the schools and many of the lower grade imbeciles. Therefore the problem of dealing with feeble-mindedness is no small matter for our public schools. Taking the estimates above and allowing fifteen pupils to a class, there are in the state enough feeble-minded children for 2231 teachers.

**Importance of Early Diagnosis and Proper Education.**—Although only four per cent of the population are feeble-minded, 40 per cent of the criminals, we are told by the criminologist, are recruited from this class. The writer made a psychological study of the girls in the state Industrial Home at Chillicothe and found that about two-thirds of the girls were feeble-minded. It is therefore important that the feeble-minded child be discovered as soon as possible in order that the proper treatment and education may be provided. The child of low mentality cannot learn the ordinary school studies. Such a child gets along poorly in school and consequently soon comes to dislike school. Truancy is usually the result. Truancy, in these cases, usually leads to crime. Therefore, as soon as it can be discovered that a child has a serious mental defect, it should be taken out of the ordinary school and be given the kind of education suited to it. This should be done for the good of the child itself as well as for the good of the rest of the pupils. There will be found, on the average, one or two feeble-minded children to a room. These children cannot do the ordinary work of the school and often give the teacher as much trouble as all the other children together. This is not right. The public school teacher should give her time to the normal children. On the other hand, the defective and subnormal child has its rights. When the state undertakes universal education, compelling attendance at school, it assumes the obligation of making it possible for each child to learn, and of giving to each child the kind and amount of training that each is capable of receiving. We must get hold of the unfortunate child early in order that we may not waste its life in fruitless endeavor and before the child has started on a life of crime.

**The Diagnosis of Mental Defects.**—The accurate diagnosis of mental defects and disease is a matter for the expert just as is the case with physical defects and disease. Of course continued failure to do the work of the school is an indication of feeble-mindedness, if no other cause for such failure can be discovered. There is usually no trouble in discovering the lower grades of imbecility. But the higher grades, particularly the highest grade known as morons, are difficult to determine and an accurate diagnosis demands the service of an expert. The time will doubtless come when every community will have the services of an expert—the expert on child life, he may be called—a man trained in medicine, psychology and education, particularly in

the needs of growing children. Under his direction, the children will be examined and educated according to their needs. At the present time only the largest cities can command the services of such men, and in the smaller communities, we must get along for the present the best we can. Our superintendents and principals can qualify themselves to diagnose feeble-mindedness for practical purposes with fair success. The main criterion must be inability to do the ordinary work of the school, slowness in understanding and in executing commands, backwardness in meeting the needs and demands of ordinary life. There are now available mental tests that can be applied to all the children of the school. Norms of performance have been worked out for all ages and for both sexes. After the tests are given the results for each child can be compared with the norm for his or her age. It will be evident at once whether the child is above or below the average. If a child is several years below the norms for his age in all or most of the tests, he is probably of inferior mentality. But after the group tests have been given to all the pupils, those that show the greatest retardation of development, particularly if the school work corroborates the findings of the mental tests, should be given special, individual examination. For this purpose, the Binet-Simon tests can be used. These tests enable one to determine the mental age of a child, and have proved of great service to those who have had to deal with subnormal children. The tests are very simple. Though an expert psychologist is required to interpret the results properly, a wise superintendent with a knowledge of psychology can by practice acquire enough skill with the tests to make them of much service to him when considered in connection with other criteria. At the end of this bulletin will be found a list of books that will assist in mental diagnosis.

**Sensory and Other Defects.**—Often a child is retarded in school work not because it is feeble-minded, but because it cannot see well or cannot hear well. Sometimes defective teeth, adenoids and other diseases retard development and prevent school progress. Therefore every school should have medical inspection, and mental and physical examinations annually. The sight and hearing of every child should be examined at least once a year. Every child found to be suffering from poor vision or defective hearing should be sent to a physician for careful examination. With just a little bit of trouble any teacher can qualify herself to test sight and hearing and determine whether a child's school work is being hindered by low acuity in either. When such is the case, the child should be sent to a specialist if possible. No one but a competent and honest oculist should prescribe glasses for a child. Poor vision is a very serious bar to school progress. Probably two-fifths of all school children could have their vision much improved



by glasses. There are not more than half as many cases of serious ear defects, but defective hearing is a most serious hindrance to a child and should be treated as soon as discovered. There is considerable prejudice against the wearing of glasses. Teachers should overcome this by explaining to parents the nature of visual defects and the principle of their correction by glasses. It is a teacher's duty to ascertain the visual and auditory acuity of every child in her charge, and not only to make proper recommendations where defects are found, but to advise and instruct the parents concerning the importance of attending to such matters. Causes of retardation may also be looked for in adenoid growths and defective teeth, as mentioned above; also in poor nourishment, insufficient exercise, insufficient sleep and sometimes in defective speech. There are various forms of word-blindness as well as color-blindness that are sometimes found.

There is no use to pay out enormous sums of money to educate children and then waste a considerable portion of it trying to teach children who cannot hear, or cannot see or who cannot learn because of some cause that could be removed.

**The Education of the Feeble-minded.**—The feeble-minded child, lacking the higher mental powers or having them in but feeble degree, can make little progress in the ordinary school studies that have in them so much that is abstract and symbolic. Reading and writing can be learned only by the highest types of mental defectives, and only poorly by them. The proper education for the feeble-minded child is motor and manual. They should have a great deal of play and should work much with their hands. Manual and industrial work is infinite in variety and complexity and can therefore be adapted to all grades and degrees of development.

In cities with a school population of five hundred to a thousand and upward there will be found a sufficient number of subnormal children for one teacher or more. Fifteen subnormal children make a class large enough for one teacher. Children three years or more retarded in their mental development should be taken out of the ordinary school and put into a special class. This should be called the "ungraded class." In charge of this class should be put the best teacher available—one successful with little children, particularly in dealing with individual children. Each child in this ungraded class will constitute a problem for the teacher. She is, by proper treatment and care, to lead each to the highest point of development possible. Some children whose development is retarded from temporary causes, under the good treatment received in this special class may be returned later to the proper grade in the regular school. Others, as the years go by will be found to be of such low mentality that they must be sent to some institution for the feeble-minded, where

they must spend their whole life, not being allowed to marry and reproduce their kind. This will usually be the case with the type known as moral imbecile.

The curriculum for the special class should consist of plays and games of great variety, well planned and graded, and every kind of hand work and construction. A really feeble-minded child is one for his whole life, and the sooner we recognize this fact and give up the hope of making a genius out of him, the better it will be for him. We must try to fit these children to live out their lives in very humble capacities. The special class will be the place where the future possibilities for each child will be determined, some to live a free, independent life in society, others to live out their lives in segregated communities. It is doubtful whether any of those whose defect is clearly from inheritance, should be allowed to marry.

The teacher of special classes must, in large measure, work out her own curriculum and methods. Experience will give her wisdom and skill.

In smaller towns and in rural communities where there is not enough subnormal children to justify the employment of a special teacher for them, it is still advisable to make an accurate study to determine who is feeble-minded. Although they cannot have a special class, they should be treated differently from the other children, and given the right kind of work as far as the teacher is able to provide it for them. They should be allowed more freedom and given more time for play, and the teacher need not worry about their progress in the ordinary school studies or their promotion.

The work and play here outlined for this type of children will make them happy and fit them to live such lives as nature has made possible.

**A Clinical Room for Diagnosis.**—Connected with the superintendent's office there should be a room fitted up with apparatus for the mental and physical examination of the pupils. For the present, the examinations can be carried out by the superintendent and the special teachers. For about \$150 such a room can be fairly well equipped. And the good that would come from only the careful visual and auditory tests would abundantly justify the expenditure, to say nothing of the good from the mental examinations. The apparatus and other equipment should consist of charts and frames for testing vision, a Pilling-McCallie audiometer for testing hearing, apparatus for testing muscular speed and strength and muscular steadiness, for measuring height and weight and for determining the lung capacity, for testing for color-blindness, for determining the ability of distinguishing differences in pitch. Besides these, there should be various pieces of apparatus, and blanks and printed forms for mental examination.

**The University Will Help.**—For three years the university has offered a course on the Abnormal Child for the purpose of fitting teachers for the work of detecting feeble-mindedness and for teaching such children. This course will be continued and extended. As occasion demands, the university will plan special courses in medicine and psychology that will aim at fitting teachers for this special kind of work. In addition to this work of preparing teachers, the university through the Extension Division will undertake to help any school in the work of diagnosis and in organizing the work of this special class. When it is desired the department of educational psychology will, if possible, send a representative to give personal assistance. In such a case, no charge will be made except the actual expenses of the trip. Any help that can be given by correspondence will always be promptly and freely given. Requests for personal assistance should be sent to the Secretary of the Extension Division; other correspondence concerning abnormal children may be addressed to the writer of this bulletin.

**Supernormal Children.**—While the main purpose of this bulletin is to set forth the educational needs of the subnormal and defective, a word must be said in the interest of the supernormal child. The argument for the segregation and separate education of the subnormal child is partly that of economy. The state will save money by giving the defective child the kind of education that he needs. The child will thereby be fitted for the only kind of life that it is possible for him to live, and in many cases, saved from a life of crime. It will be much cheaper for the state to spend money for the proper education of the defectives than to spend it maintaining courts, jails and penitentiaries. No one is interested in the subnormals because he thinks geniuses can be made of them. Our interest in the supernormal child, however, is for an entirely different reason. While there are about four per cent of subnormal children, there is about the same number of children distinctly supernormal or superior. They are capable of a great deal more intellectual work and of a higher order than their fellows of the same age. Now it is of the greatest importance to society that these children of superior ability advance as fast and as far as their best interests demand. The child of superior mind can usually make his progress through the grades much faster than the normal child. He should either be allowed to do this or else given much more work and more difficult work than is given to the others of the same age. The important thing is that each child be doing just the work that his development at the time demands and be working with others of the same mental age. It is to the interest both of society and the individual that the child of superior mind be given the most favorable opportunity for development, for on these few superior minds the progress of civilization depends.

Some children are "all around superior," while others are gifted in some special field, as music, painting, invention, etc. When the latter is clearly the case, the child should be given the ordinary instruction of the public schools and also allowed to have outside of school, the special training that his talent demands. Briefly, we plead for the conservation of human energy, doing for every child that which is best for it and doing it at the proper time.

### LIST OF BOOKS

In dealing with the abnormal child, much help can be had from books. The following should be available to those who undertake to make special provision for abnormal children. They may be obtained from the publishers or from the University Co-operative Store, Columbia.

- W. S. CORNELL—*Health and Medical Inspection of School Children*, F. A. Davis Company, Philadelphia, \$3.00.
- H. H. GODDARD—*The Binet-Simon Tests*, published by the Training School, Vineland, N. J., fifteen cents. This pamphlet gives the tests as used by Goddard.
- A. HOLMES—*The Conservation of the Child*, J. B. Lippincott Co., Philadelphia, \$1.25.
- E. B. HUEY—*Backward and Feeble-minded Children*, Warwick and York, Inc., Baltimore, \$1.40.
- G. L. NOYES—*Relation of Sight and Hearing to Early School Life*, University of Missouri Bulletin, Medical Series, No. 5. This pamphlet is free and should be in the hands of every teacher in the state.
- W. H. PYLE—*The Examination of School Children*, The Macmillan Co., New York and Chicago, fifty cents. This manual gives directions for mental and physical tests, with norms for the various school ages and both sexes.
- C. H. TOWN—*Binet's Method of Measuring the Development of the Intelligence of Young Children*, The Courier Co., Lincoln, Illinois, \$1.00.
- J. H. VAN SICKLE—*Provision for Exceptional Children in Public Schools*, Bulletin, 1911, No. 14, United States Bureau of Education, free.
- J. E. W. WALLIN—*The Mental Health of the School Child*, Yale University Press, New Haven, \$2.00.
- G. M. WHIPPLE—*Manual of Mental and Physical Tests*, Warwick and York, Inc., two volumes, \$3.75. This large work is a comprehensive treatment of the subject of tests.
- L. WITMER—*The Special Class for Backward Children*, The Psychological Clinic Press, Philadelphia, \$1.50.

Two magazines, devoted to the interests of the abnormal child, will be helpful: *The Psychological Clinic*, published by the Psychological Clinic Press, Philadelphia, \$1.50; and *the Training School*, published at Vineland, N. J., \$1.00.



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